— Soil Fertility Note 1 —
The Need for Soil Testing

October 1996

NCDA&CS Agronomic Division **Web site: www.ncagr.com/agronomi** **Phone: 919-733-2655**

Serving North Carolina growers since 1940

Would you add oil to your car's engine without checking the level on the dipstick first? Of course not! That would be silly and possibly dangerous. However, many people do something similar every year when they apply lime and fertilizer to their soil without getting a soil test. Both farmers and homeowners are guilty of this practice.

Some people believe that lime should be applied every so often without a concern for over-application and that there is no need to take a soil sample. Certainly, most soils in the southeastern United States are naturally acidic and when crops are grown and fertilizers are applied, the result will be a more acidic soil. How then do you decide how much lime to apply? After years of soil testing, it may be possible to see a pattern that suggests that a certain amount of lime is needed at regular intervals. However, if this is the pattern you are following, it would be wise to submit a soil sample periodically to confirm the soil pH.

There are two common mistakes that many people make. The first is believing that you cannot apply too much lime. The second is relying on guesswork to determine how much lime is needed.

When growers guess about the need for lime, too little or too much is likely to be applied. Micronutrient deficiencies are common in some areas of North Carolina as a result of raising the soil pH above the desired level. As soil pH rises above the target level, nutrients such as iron, manganese, boron, copper and zinc become less available to plants for uptake.

On the other hand, "guesstimates" for lime may be too low. It is common to see homeowners purchase one bag of lime when they purchase one bag of fertilizer. Based on an average lawn size of 5000 ft^2, one bag of fertilizer may be sufficient. Applying one bag of lime over 5000 ft^2, however, will have little significant effect on soil pH.

By sampling, you can potentially save money that might otherwise be spent on unneeded lime and fertilizer. For example, growers of flue-cured tobacco often routinely apply phosphorus. In areas where soil levels are high in phosphorus, a soil test could save these farmers up to $60 per acre. Growers who do not sample may penalize themselves by having to replant or replace their crop later due to either inadequate or excessive nutrients.

Soil sampling analysis is a free service for any resident of North Carolina. Most other states in the southeast charge for this type of information and analysis. Sampling supplies and information are available from your local agricultural advisors or the Agronomic Division in Raleigh.

J. Kent Messick
NCDA&CS Agronomic Division

**Questions or comments should be directed to the Soil Testing Section of the NCDA&CS Agronomic Division.
Additional information on soil testing, nematode testing and plant/waste/solution analysis
is available from the NCDA&CS Agronomic Division.**

200 copies of this public document were printed at a cost of $3.84 or $0.02 cents/copy.